## PROCEEDINGS

OF THE
BIOLOGICAL SOCIETY OF WASHINGTONNAIN
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SOME RECORDS AND DESCRIPT AMERICAN CHILOPODS<br>BY RALPH V. CHAMBERLIN

The centipeds recorded in the present paper, unless otherwise noted, were collected by Stanley and Dorothea Mulaik, mostly during the summer of 1941 in the course of a trip from Salt Lake City to Edinburg, Texas, and return by way of Colorado, Wyoming, Montana and Idaho. All material, including types of the new species, is at present retained in the author's collection at the University of Utah.

## SCOLOPENDRIDA

## CRYPTOPIDAE

Otocryptops gracilis (Wood)
Locality.-Texas: Harris County, Houston, September-December, 1941. Three specimens taken by Russell Scott.

## Theatops posticus (Say)

Locality.-Texas: Harris County, Houston, September-December, 1941. Several specimens, mostly young, taken by Russell Scott.

Kethops atypus, new species.
Differing from the two species previously described under Kethops, in having the cephalic plate overlapping the first tergite and in lacking a transverse sulcus on the latter.

Cephalic plate with no transverse sulcus; with short, paired, longitudinal sulci over the posterior portion.

Paired sulci beginning on the third tergite and continuing on those to and including the 22 nd . Last tergite with caudal margin forming an angle, the lateral margins straight and slightly diverging caudad to the base of the triangular caudal portion.

Last ventral plate trapeziform, the sides converging caudad to the straight caudal margin.

Legs, excepting posterior pair, without spines or teeth.
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Coxopleurae of last legs truncate posteriorly; bearing below along sternite about 20 small pores on each side.

Anal legs with femur and tibia bearing beneath numerous long, stiff, spine-like setae but with no teeth; metatarus armed beneath with a series of 6 teeth, and first tarsal joint with a series of 3 teeth.

Length, about 15 mm .
Locality.-Utah: Salt Lake City, two specimens taken April, 1942.
Cryptops centralis, new species.
Resembling $C$. eques, occurring in the same region, in the relations of head and first tergite and in having a simple, evenly semi-circular sulcus on the latter.

Differing from eques in the form of the last dorsal plate which is angular instead of semicircular behind.

In the anal legs of the male the femur and tibia with numerous short, acute spines beneath, these leaving no naked area. Metatarsus below with a series of typically 6 small, even teeth, and the first tarsal joint with 5 as against 3 on metatarsus and 2-3 on first tarsal joint in eques.

Length, 11 mm .
Locality.-Texas: Kerr County, Center Point, July 29, 1941. One specimen.

The type specimens of $C$. eques are mostly considerably smaller than the holotype of C. centralis, although some of the former are as much as 10 mm . long.

## SCOLOPENDRIDAE.

## Scolopendra viridis Say.

Locality.-New Mexico: 6 miles south of Mountainair, May 31, 1941, one specimen; Dona Ana County, San Augustine Pass, June 1, 1941, one young specimen.

Texas: Jim Wells County, 12 miles north of Alice, June 6, 1941, one specimen.

## Scolopendra polymorpha Wood.

Localities.-Texas: Hudapeth County, Hancock, June, 1941, one specimen.

New Mexico: Tijeras, May 30, 1941, one specimen; 33 miles north of Gallup, May 29, 1941, several specimens; Manzano, May 31, 1941, one specimen; 6 miles south of Mountainair, May 31, 1941, several specimens.

## GEOPHILIDA.

SCHENDYLIDAE.
Schendyla nemorensis (C. L. Koch).
Locality.-Utah: Salt Lake City, April, 1942, many specimens taken on cultivated land in the city proper. Apparently introduced.

## Holitys neomexicanus Cook.

Locality.-New Mexico: 1 mile north of Thoreau, May 29, 1941, two specimens.

Originally described from Dripping Spring, Organ Mountains, in the same state and not subsequently heretofore recorded.

## BALLOPHILIDAE.

## Ityphilus nemoides, new species.

The color of the holotype at present is pale yellow, any purplish pigment that may have been present in life having disappeared.

Body considerably constricted over segments following head and first segment.

Head small as usual. Antennae moderately clavate beyond the middle, not as strongly clavate distally as, e. g., in savannus.

Spiracles all small and circular.
Ventral pores in a well-defined circular area.
Last ventral plate broad, trapeziform, strongly narrowed caudad.
Anal legs in male holotype strongly thickened proximally, narrowing subconically distad as usual.

Pairs of legs in male holotype, 73.
Length, 30 mm .
Locality.-Texas: Jim Wells County, 12 miles north of Alice, June 6, 1941, one male.

Most easily separated from the Mexican I. savannus, in the notably larger number of pairs of legs.

## GEOPHILIDAE.

## Geophilus phanus, new species.

Of the usual yellow color, with head and prehensors of a slightly chestnut cast.
Cephalic plate longer than broad, widest posteriorly; caudal margin wide and straight and the anterior margin forming a very obtuse angle; sides convex; frontal plate not discrete.

Basal plate overlapped anteriorly by the cephalic, as wide posteriorly as the following tergite. Claws of prehensors when closed about even with anterior margin of head; all joints of prehensors wholly smooth within. Prosternum unarmed anteriorly; chitinous lines distinct except at anterior ends.

All spiracles circular, the first largest, the second intermediate.
Last ventral plate broad, trapeziform. Pores small and numerous, arranged in a series lying along each margin of sternite and continuing back part way along margin of tergite, with 3 more widely separated pores on the side.

Anal pores distinct.
Pairs of legs, 63.
Length, 29 mm .
Locality.-Montana: Brown, elevation 5060 feet, September 19, 1941, one female.

Probably most closely related to G. huronicus Meinert. It differs in the shorter prehensors which do not exceed the anterior margin of head and have the first joint very short within and wholly without trace of a tooth; also in the more numerous coxal pores which are free from the last sternite.

Geophilus glyptus Chamberlin.
Locality.-Utah: Mill Creek Canyon, Mar. 15, 1943. Several Specimens.

> Arenophilus bipuncticeps (Wood).

Locality.-Wyoming: Natrona Co., Casper, August 10, 1941, one specimen.

## LINOTAENIIDAE. Linotaenia chionophila (Wood).

Localities.-Wyoming: Natrona Co., Casper, Aug. 10, 1941, one specimen; Fremont County, Brooks Lake Falls, August 12, 1941, two.

Colorado: Larimer County, Home, Aug. 7, 1941, two specimens.
Montana: 19 miles E. of Butte, Aug. 18, 1941, one specimen.
Idaho: Spencer, August 21, 1941, several specimens.

## Linataenia fulva (Sager).

Localities.-Colorado: Jackson Co., $7-10 \mathrm{mi}$. W. of Cameron Pass, 9,000 feet elevation, Aug. 8, 1941, two specimens; Larimer Co., 7 mi . W. of Home, 8,500-9,000 feet elevation, Aug. 7, 1941, five specimens, and Cameron Pass, $10,000 \mathrm{ft}$., Aug. 8, 1941, two specimens.

## PACHYMERINIDAE.

Genus ZYGOMERIUM, new genus.
Related to Pachymerium and Eremerium from which differing in having but 2 large pores or pits on posterior coxae instead of many small ones, and in having at most a membraneous terminal article or appendage on anal legs in place of a normal claw. Median piece of labrum distinct but not strongly developed, with teeth obsolete. First maxillae with telopodite two jointed; bearing two pairs of lappets. Second maxillae with coxae broadly united at middle; claw of palpus wholly smooth. Prehensors surpassing anterior margin of head; prosternum with chitinous lines well developed.

Ventral pores not detected in the genotype.
Genotype.-Zygomerium euphanum, new species.

## Zygomerium euphanum, new species.

Cephalic plate longer than wide, widest behind middle; anterior margin slightly obtusely angled at middle; posterior margin straight; surface coarsely punctate and with a pair of sulci extending from caudal margin forward to middle.

A single, well defined chitinous spot. First maxillae with telopodite
distinctly two jointed; bearing two lappets on each side of which the distal one much exceeds the second joint.

Basal plate well overlapped by the cephalic; as wide posteriorly as the adjacent tergite, or nearly so. Claws of prehensors when closed reaching to end of first antennal article; claw armed within at base with an abortive denticle, the other articles unarmed. Prosternum unarmed anteriorly; chitinous lines distinct, long, being complete except at anterior end.

First spiracle large, vertically broad elliptic, the second intermediate in size and form, the following ones circular.

Most ventral plates showing at middle a sharply impressed transverse sulcus widely broken at the middle.

Last ventral plate broad, trapeziform. Coxal pits large, two on each side, these typically free or mostly so.

Anal legs with claw replaced by a slender membranous appendage.
Pairs of legs, mostly 65-67.
Length, to about 40 mm .
Locality.-New Mexico: West of Glencoe, June 1, 1941, numerous specimens, and two north of same place May 31; West of Ruidosa Junction, June 7, 1941, two specimens.

Zygomerium rotarium, new species.
The cephalic plate differs from that of euphanum in having the sides parallel, the width being uniform between the narrower anterior and posterior ends; caudal margin proportionately narrower than in euphanum. No frontal suture.

Second article of telopodite of first maxillae distally broadly rounded, bearing four setae on ventral face; lappet of first article long and thick.

Claw of prehensors armed at base with a well-developed conical tooth; prefemur bearing toward distal end a rounded, nodular tooth; other joints unarmed. Prosternum with anterior margin unarmed; chitinous lines distinct except at anterior end as in euphanum.

First spiracle large, vertically broadly elliptic, the following ones gradually decreasing in size and becoming strictly circular.

Last ventral plate broad, trapeziform but with caudal margin forming an obtuse, reentrant angle. Coxal pores covered by the sternite.

Anal legs clawless ending in a point but not bearing a definite membranous appendage such as present in euphanum.

Pairs of legs, 59.
Locality.-Utah: City Creek Canyon, Rotary Park, May 21, 1941, one female.

CHILENOPHILIDAE. Arctogeophilus umbraticus (McNeill).

Locality.-Texas: Houston, September-December, 1941, one specimen taken by R. Scott.

Taiyna moderata Chamberlin.
Locality.-New Mexico: Tijeras, May 30, 1941, two specimens, hav-
ing respectively 47 and 49 pairs of legs. Previously known only from Monterey County, California.

## Arctogeophilus xenoporus (Chamberlin).

Localities.-Utah: Garden City, Bear Lake, 5928 feet elevation, August 24, 1941, two specimens.

Idaho: 7 miles north of Georgetown, August 23, 1941, numerous; Humphrey, 6,500 feet elevation, August 20, 1941, several; Lava Hot Springs, August 22, 1941, several; Lund, 6,500 feet elevation, August 22, 1941, a young specimen.

Wyoming: Teton County, Turpin Meadows, August 13, 1941, one; Leeks Camp, August 13, 1941, one.

Colorado: Douglas County, 20 miles southwest of Sedalia, August 6, 1941, several specimens; Westcreek, August 5, 1941, two specimens.

## SOGONIDAE.

## Garrina alicea, new species.

Head rather small; widest behind middle; frontal suture present. Prebasal plate exposed.

Labrum conspicuously different from that of G. paropoda in lacking the characteristic secondary transverse fold; lateral pieces widely separated by the pectinate median fold much as in Pycnona pujola (See Bull. Univ. of Utah, Biol. Ser., Vol. VII, no. 3, pl. II, fig. 9), with outer portion smooth, bearing a few pectinae toward mesal ends.

Differing from paropoda also conspicuously in the first maxillae in which there are on each side two long lappets whereas in alicea the coxal lappet is absorbed and the second lappet does not extend beyond the end of the terminal article. This article in alicea bears 7 or 8 setae on its ventral face, whereas in that of the holotype of paropoda there are but 3.

Claws of prehensors when closed not surpassing anterior margin of head; all joints unarmed. Prosternum with no teeth anteriorly; chitinous lines complete.

First spiracle much enlarged, it and the following ones of anterior region elliptic and a little oblique, gradually decreasing in size and assuming the circular shape toward middle region.

Last sternite broad as usual. Two coxal pits of moderate size on each side.

Second tarsal joint of anal legs short, with its claw almost abortive.
Pairs of legs, 59-61.
Length, about 32 mm .
Locality.-Texas: Jim Wells County, 12 miles north of Alice, June 6, 1941, two females; Edinburg, June 4, 1941, one female paratype.

## LITHOBIIDA.

ETHOPOLIDAE.
Bothropolys permundus (Chamberlin)
Localities.-Utah: Salt Lake County, Mill Creek Canyon, May 21,

1941, and 1943, several specimens on each date; 12 miles southwest of Garden City, August 28, 1941, and at Garden City, elevation 5,924 feet, August 24, 1941.

Idaho: 7 miles north of Georgetown at 6,500 feet elevation, August 23, 1941, many specimens.

## GOSIBIIDAE.

Gosibius arizonensis Chamberlin.
Locality.-New Mexico: west of Ruidosa Junction, June 1, 1941, three specimens; west of Glencoe, June 1, 1941, 6 specimens.

Gosibius texicolens Chamberlin.
Locality.-Texas: Jim Wells County, 12 miles north of Alice, June 6, 1941, one specimen.

Gosibius aberrantus, new species.
Typically the dorsum is brown with an interrupted median longitudinal darker stripe; head of a somewhat orange cast with a darker spot at base; antennae also orange.

Antennae short, composed of about 26 articles. Ocelli in 3 longitudinal series; e. g., $1+4,3,2$.

Prosternal teeth $3+3$.
Posterior angles of none of dorsal plates produced.
Coxal pores small and circular; typically $5,5,5,4$.
Ventral spines of first legs, $0,0,3,2,1$; dorsal, $0,0,3,2,2$. Ventral spines of penult legs, $0,1,3,3,2$; dorsal, $1,0,3,1,1$; claw unarmed. Ventral spines of anal legs, $0,1,3,3$ (2), 1 ; dorsal, 1, $0,3,1,0$; claw unarmed. Only last pair of coxae laterally armed.

Claw of female gonopods strictly entire; basal spines $2+2$.
Anal and penult legs of male slender, with no obvious modifications.
Length of female holotype, 18 mm .
Localities.-New Mexico: West Ruidosa Junction, June 1, 1941 (holotype); Tijeras, May 30, 1941, one specimen; Fort Stanton, May 31, 1941, many specimens of both sexes; north of Glencoe, May 31, six specimens; 11 miles west of Thoreau, May 29, four; 3 miles north of Gallup, May 29, 1941, about ten specimens.

Distinguished from the related G. arizonensis in having prosternal teeth $3+3$ instead of $2+2$, in the fewer ocelli and in having only the last pair of coxae laterally armed.

Gosibius escabosanus, new species.
Dorsum brown.
Antennae of intermediate length, composed mostly of 22-25 articles. Ocelli in three series; e. g., $1+5,4,2$.

Prosternal teeth $2+2$.
None of dorsal plates with posterior angles produced.

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Coxal pores 3, 4, 4, 3.
Ventral spines of first legs, $0,0,2,3,2$; dorsal, $0,0,2,2,1$. Ventral spines of penult legs, $0,1,3,3,2$; dorsal, $1,0,3,1,1$; claw single. Ventral spines of anal legs, $0,1,3,2$; dorsal, $1,0,3,1,0$; claw single. Last one or two pairs of coxae laterally armed.

Claws of female gonopods entire; basal spines $2+2$.
Penult legs of male with fourth joint conspicuously elevated above at distal end, the lobe highest at caudal end from where sloping gradually proximad.

Length, 11 mm .
Locality.-New Mexico; Escobosa, May 30, 1941, one male and two females.

Distinguished from G. texicolens, a similarly small species, in spining of legs and modification of penult legs of male.

Guambius coloradanus Chamberlin.
Localities.-Colorado: Douglas County, 18-20 miles southwest of Sedalia, 7,000 feet elevation, August 6, 1941; several specimens; 2 miles south of West Creek, August 5, 1941; Raton Pass, August 4, 1941, two specimens.

Pseudolithobius megaloporus Stuxberg.
Locality.-California: 4 miles north of Ba.dger, April 22, 1941, one specimen taken by Allen Mulaik.

## LITHOBIIDAE.

## Lithobius forficatus (Linne).

Localities.-Utah: Salt Lake City, many specimens taken at various dates in 1941, 1942 and 1943.

Wyoming: Natrona County, Casper, August 10, 1941, several specimens.

## Neolithobius suprenans Chamberlin.

Locality.-Texas: Comal County, Spring Branch, July 14, 1941; four specimens.

Colorado: Raton Pass, August 9, 1941, one male, variant in having the ventral spines of the right anal leg $0,1,3,2,1$, instead of the normal $0,1,3,3,2$.

## Tidabius tivius (Chamberlin).

Locality.-Utah: Salt Lake City, April, 1942, several specimens.
Nadabius coloradensis (Cockerell).
Localities.-Colorado: Jackson County, Cameron Pass, 9,000 feet elevation, August 8, 1941, numerous specimens; Larimer County, 7 miles west of Home, 8,500 feet elevation, August 7, 1941, many specimens and Home, same date; Cameron Pass, 10,000 feet elevation, August 8, 1941; Rustic, August 7, 1941, two specimens; Douglas County, 20
miles southwest of Sedalia, August 6, 1941, many specimens, and West Creek, August 5, also numerous specimens.

Wyoming: Woods Landing, elevation 8,000 feet, August 8, 1941, five specimens.

Montana: 18 miles E. of Butte, August 18, 1941, many specimens.
Nadabius iowensis (Meinert).
Localities.-Colorado: Manitou, August 5, 1941, two specimens.
Wyoming: Fremont County, 10 miles east of Shoshoni, August 11, 1941, about 10 specimens.

Nadabius mesechinus (Chamberlin).
Localities.-Idaho: Humphrey, 6,500 feet, August 20, 1941, many specimens.

Montana: 16 miles north of Dillon, August 19, 1941, three specimens.

## Pokabius bilabiatus (Wood).

Localities.-Minnesota: Wright County, June, 1941, one specimen taken by J. H. Swanson.

Pokabius centurio Chamberlin.
Localities.-New Mexico: Escabosa, May 30, 1941, nine specimens; 5-11 miles from Tijeras, May 30, 1941, numerous specimens; 6 miles south of Mountainair, May 31, 1941, numerous; W. Ruidosa Junction, June 1, 1941, six specimens; W. of Glencoe, June 1, 1941, several specimens.

## Pokabius utahensis (Chamberlin).

Localities.-Idaho: Georgetown, August 22, and 7 miles N. of Georgetown, August 22 and 23,1941 , many specimens.

Utah: Garden City on Bear Lake, August 24, and Preston Valley Pienic Grounds, Logan Canyon, August 25, 1941, many specimens.

Lophobius loganus Chamberlin.
Localities.-Idaho: Lava Hot Springs, August 22, and Georgetown, also August 22, 1941, several specimens at each place.

## Arebius diplonyx (Chamberlin).

Locality.-New Mexico: W. of Ruidosa Junction, June 1, 1941, several specimens referred tentatively to this species, previously known from California.

## Arebius convergens, new species.

Falling in the group with strictly entire claw in the female gonopods (Arebius sens. str.).
Near A. epelus which it resembles in having the articles of the antennae 21 instead of the more usual 20 , but differing, e. g., in having the
ventral spines of the anal legs $0,1,3,2,1$ or $0,1,3,2,0$ instead of $0,1,3,1,0$ and in not having anal and penult legs channeled along mesal side.

Ocelli typically in 3 series; e. g., $1+4,3,2$.
Ventral spines of first legs, $0,0,1,3,1$; dorsal, $0,0,2,2(1), 1$. Ventral spines of penult legs, $0,1,3,3,2$; dorsal, $1,0,3,1,1$; claw single. Dorsal spines of anal legs, $1,0,3,1,1$; claw single. Dorsal spines of anal legs, $1,0,3,1,0$; claw single. Last pair of coxae laterally armed with a minute spine or this spine obsolete.

Outer basal spine of female gonopods much stouter than the mesal one (Equal in epelus).

Length, up to 10 mm .
Locality.-New Mexico: N. of Glencoe, May 31, 1941, ten specimens (including holotype); Tijaras, May 30, many specimens; 6 miles S. of Mountainair, May 31, 1941, also many specimens.

## Arebius montivagus, new species.

Belonging in the group with partite claw on female gonopods; close to A. diplonyx from which it may be distinguished in having only the femora of first two pairs of legs with a single ventral spine instead of the first 7 or 8 , and in having only the last pair of coxae laterally armed.

Antennae consisting of 20 articles. Ocelli in 3 or 4 series; e. g., $1+5,5$, 4 and $1+5,5,3,1$.

Coxal pores, e. g., 3, 4, 4, 4 (5).
Ventral spines of first legs, $0,0,1,3,1$; dorsal, $0,0,1,2,1$. Dorsal spines of the second legs, $0,0,2,2,1$. Ventral spines of penult legs, $0,1,3,3,2$; dorsal, $1,0,3,1,1$; claws 2. Ventral spines of anal legs 0,1 , $3,2,0$; dorsal, $1,0,3,1,0$; claws 2 . Last pair of coxae laterally armed.

Claw of female gonopods distinctly tripartite, the lobes acute. Basal spines proportionately short and broad, of uniform width to the short, pointed apical portion much as in diplonyx.

Length, to 12 mm .
Locality.-Montana: 6 miles W. of Belgrade on Gallatin River, August 17, 1941, ten specimens; 4 miles N. or Divide, August 18, 1941, four specimens.

## Arebius fremontus, new species.

Also belonging in Arebius sens. str. in having the claw of female gonopods entire. In having the anal legs armed with a double claw agreeing with A. elysianus and A. medius, but differing from these, among other features, in having the ventral spines of the anal legs $0,1,3,2,0$, instead of respectively $0,1,3,3,1$ and $0,1,3,2,1$.

Antennae short, consisting of 20 articles. Ocelli in 3 series; e. g., $1+5$, 4, 2.

Prosternal teeth usually the ordinary $2+2$, but in some specimens $2+3$.
Coxal pores mostly $3,4,4,3$.
Ventral spines of first legs, $0,0,1,3,1$; dorsal, $0,0,2,1,1$. First four pairs of legs with but a single ventral spine on article 3 . Ventral
spines of penult legs, $0,1,3,3,1$; dorsal, $1,0,3,1,1$; claw double. Last two pairs of coxae laterally armed.

Claw of female gonopods rather slenderly acuminate. Outer basal spine larger than the inner.

Length, up to about 10 mm .
Localities.-Wyoming: Fremont County, Brooks Lake Falls, August 12, 1941, nine specimens; Teton County, Turpin Meadows, August 13, about ten; Tower Falls, August 16, four.

Montana: 16 miles N. of Dillon, August 19, several specimens.
Arebius navajo, new species.
Near $A$. tridens but a smaller form differing in having the claw of the penult legs single instead of armed with a second claw and a spine, and in having last two pairs of coxae, instead of the last four, laterally armed.

Antennae consisting of 21 to 23 articles. Ocelli in 3 series; e. g., $1+4$, 4, 3.

Coxal pores 2, 3, 3, 2.
Ventral spines of first legs, $0,0,1,2,1$; dorsal, $0,0,1,2,1$. Ventral spines of penult legs, $0,1,3,3,2(1)$; dorsal, $1,0,3,1,1$. Ventral spines of anal legs, $0,1,3,2,0$; dorsal, $1,0,3,1,0$; claw single.

Claw of female gonopods tripartite but only two lobes well developed, the outer lobe being almost obliterated.

Length, to about 11 mm .
Localities.-New Mexico: Escabosa, May 30, 1941, twelve specimens; W. of Glencoe, June 1, five specimens.

## Arebius tetonus, new species.

Resembling A. tridens in having the claw of the female gonopods tripartite and in having the claw of the penult legs double. It differs in smaller size, in having only the last one or two pairs of coxae laterally armed, in having the articles of the antennae normally 20 instead of 21 , and in much fewer ocelli in 2 series instead of 3 ; e. g., $1+4,3$.

Coxal pores, 3, 4, 4, 4.
Ventral spines of first legs, $0,0,1,2(3), 1$; dorsal, $0,0,1,2,1$. Ventral spines of penult legs, $0,1,3,3,2$; dorsal, $1,0,3,1,1$; claw armed with secondary claw and spine. Ventral spines of anal legs, $0,1,3,2$ (3), 0 ; dorsal, $1,0,3,1,0$; claw single.

Claw of female gonopods distinctly tripartite; basal spines short and relatively broad as in dolius, etc.

Length, near 10 mm .
Locality.-Wyoming: Teton County, Leeks Camp, September 13, 1941, eight specimens; Canyon, August 15, 1941, nine specimens; Madison Jct., August 15, a male and female.

## SCUTIGERIDA. <br> SCUTIGERIDAE.

Scutigera coleoptrata (Linne).
Locality.-Texas: Dallas County, N. E. of Dallas (White Rock Lake), May 1, 1941, two specimens.

## Scutigera linceci (Wood).

Texas: Jim Wells County, 12 miles N. of Alice, June 6, 1941, several small specimens referred tentatively to this species.

Scutigera dorothea, new species.
Like S. homa, of Arizona, in its light ferruginous color, showing no definite longitudinal stripes. Legs lighter, without annuli.

Differing from S. homa in the antennae, the first division of which is notably shorter, consisting of only about 47 articles as against 80 in homa. Second division composed of about 125 segments.

First division of tarsus of leg I composed of 12 articles, the second division of about 28. First division of tarsus of leg II, of 11 articles; of leg III of 10 articles; of leg IV of 8 ; of leg V, 6 and of leg VI, 7.

Stomata short, scarcely at all projecting into the caudal emargination.
Caudal margin of last tergite (i. e. of the 8th) nearly straight, not emarginate as in homa.

Gonopods of female much more divergent than in homa (cf. fig. in Ent. News, 53 , p. 10, 1942), with the claws proportionately decidedly longer.

Length of female holotype, 12 mm .
Localities.-Texas: Brewster County, 4 miles W. of Alpine, June 2, 1941, five specimens, including the holotype; Val Verde County, Langtry, June 3, 1941, one specimen.

## Scutigera phana, new species.

Differing from $S$. linceci in lacking a median longitudinal dark stripe on dorsum, but with a narrow dark stripe along each side, the broader mid-dorsal region and the lateral borders being pale yellow; last dorsal plate entirely dark and the head entirely pale. Posterior legs in part inclined to be dusky purple between femur and middle of first tarsal division, elsewhere yellow; other legs paler throughout, not annulate. Antennae yellow.

First division of antennae composed of about 36 very short articles, the second of about 96 .

First division of tarsus II composed of 10 articles, the second division of 22 . First division of tarsus III of 9 articles; of tarsus IV of 7 articles; of tarsus V and IX each of 6 articles.

Stomata very short. Caudal margin of last tergite not emarginate.
Gonopods of female strongly divergent and with claws relatively long, nearly as in dorothea.

Length, 9.5 mm .
Locality.--Texas: Hidalgo County, Edinburg, June 8, 1941, one female.

